

Long stroke parallel hand Double acting/single acting

HGP Series

● Operational stroke length: 56mm

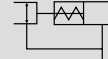
Double acting



Single acting (normally open)



Single acting (normally closed)



Specifications

Descriptions	HGP
Size	3CS
Bore size mm	φ25
Actuation	Double acting/single acting
Working fluid	Compressed air
Max. working pressure MPa	0.7 (≈100 psi, 7 bar)
Min. working pressure MPa	0.3 (≈44 psi, 3 bar)
Ambient temperature °C	5 (41°F) to 60 (140°F)
Port size	M5
Operating stroke length mm	56
Rod diameter mm	φ10
Volumetric capacity (reciprocating) cm ³	11.8
Repeatability mm	±0.03
Weight kg	0.85
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)

Switch specifications

Descriptions	Proximity 2-wire	Proximity 3-wire
	T2H/V	T3H/V
Applications	Dedicated for programmable controller	For programmable controller, relay
Output method	-	NPN output
Power supply voltage	-	10 to 28 VDC
Load voltage/current	10 to 30 VDC, 5 to 20 mA (*1)	30 VDC or less, 100 mA or less
Indicator lamp	LED (Lit when ON)	
Leakage current	1 mA or less	10 μA or less
Weight	1 m:18 g 3 m:49 g 5 m:80 g *3	

*1 : The above max. load current is 20 mA at 25°C.

The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)

*2 : Refer to Ending Page 1 for other switch specifications.

*3 : The weight of switch mounting bracket is 1.5 g.

- LCW
- LCR
- LCG
- LCX
- LCM
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCC2
- RCS
- PCC
- SHC
- MCP
- GLC
- MFC
- BBS
- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- Hand
- Chuk
- MecHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending
- LSH
- FH100
- HAP
- BSA2
- BHA/BHG
- LHA
- LHAG
- HKP
- HLA/HLB
- HLAG/HLBG
- HLD
- HCP
- HMF
- HMFB
- HFP
- HLC
- HGP
- FH500
- HBL
- HDL
- HMD
- HJD
- HJL
- BHE

How to order

Without switch (built-in magnet for switch)

HGP - 3CS - O

With switch (built-in magnet for switch)

HGP - 3CS - O - T2H - R

A Size

B Option

C Switch model No.

D Switch quantity

[Example of model No.]

HGP-3CS-O-T2H-R

Model: Long stroke parallel hand

- A** Size : 3CS
- B** Option : Single acting, normally open
- C** Switch model No. : Proximity S3 switch, lead wire 1 m
- D** Switch quantity : 1 on open side

Code	Content				
A Size					
3CS					
B Option					
Blank	Standard (double acting)				
O	Single acting (normally open)				
C	Single acting (normally closed)				
C Switch model No.					
Axial lead wire	Radial lead wire	Contact	Voltage	Display	Lead wire
T2H*	T2V*		AC DC		
T3H*	T3V*	Prox.		● 1-color display	2-wire
				● display	3-wire
* Lead wire length					
Blank	1 m (standard)				
3	3 m (option)				
5	5 m (option)				
D Switch quantity					
R	1 on open side				
H	1 on closed side				
D	2				

How to order switch

● For switch T*H*

· Switch body + mounting bracket set

HGP - T2H

Switch model No.
(Item C above)

· Switch body

SW - T2H

Switch model No.
(Item C above)

· Mounting bracket set

HGP - T

● For switch T*V*

· Switch body + mounting bracket set

HGP - T2V - *

Switch model No.
(Item C above)

· Switch body

SW - T2V

Switch model No.
(Item C above)

· Mounting bracket set

HGP - TV - *

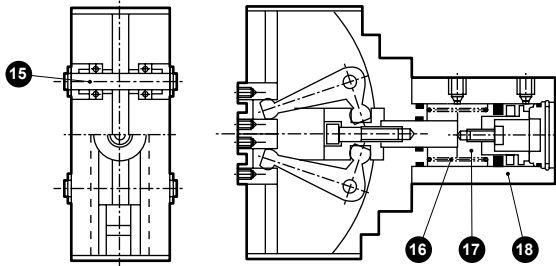
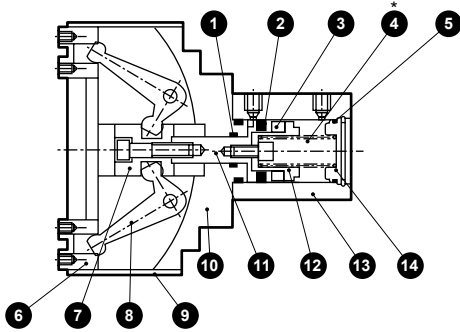
(Select either R (open side) or H (closed side) for sections marked with an asterisk (*).)

LCW
LCR
LCC
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
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FH100
HAP
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BHA/BHG
LHA
LHAG
HKP
HLA/HLB
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HMF
HMFB
HFP
HLC
HGP
FH500
HBL
HDL
HMD
HJD
HJL
BHE

Internal structure and parts list

● Standard (double acting)/O (normally open)

● C (normally closed)



Cannot be disassembled

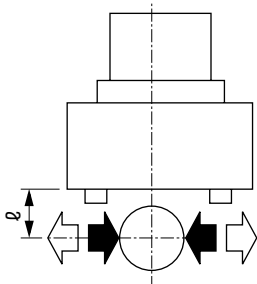
* Standard (double acting) does not contain 4 spring.

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Rod packing	Nitrile rubber		11	Piston A	Stainless steel	
2	Piston packing	Nitrile rubber		12	Piston B	Acetal resin	
3	Magnet			13	Cylinder	Aluminum alloy	
4	Spring	Steel	O type only	14	Cylinder guard	Acetal resin	
5	Cylinder gasket	Nitrile rubber		15	Fulcrum axis	Steel	
6	Master key	Steel		16	Spring	Stainless steel	
7	Operation ring	Steel		17	Piston	Stainless steel	
8	Arm	Steel		18	Cylinder	Aluminum alloy	
9	Side cover	Stainless steel					
10	Body	Aluminum alloy					

Gripping power performance data

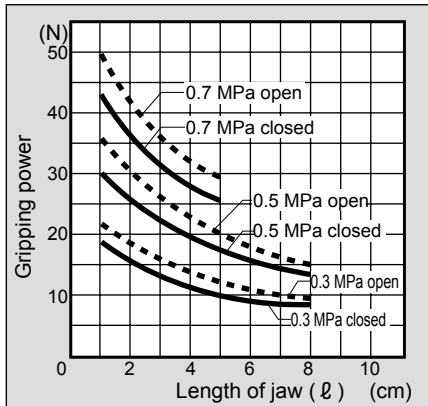
The gripping power in the opening/closing directions with jaw length L of hand with a supply pressure of 0.3, 0.5 and 0.7 MPa is shown.

- Open direction (⇐) ----- (shown with broken line)
- Closed direction (⇒) ——— (shown with continuous line)



(Note) When making a selection, read the precautions for design and selection on page 1636.

● HGP-3CS



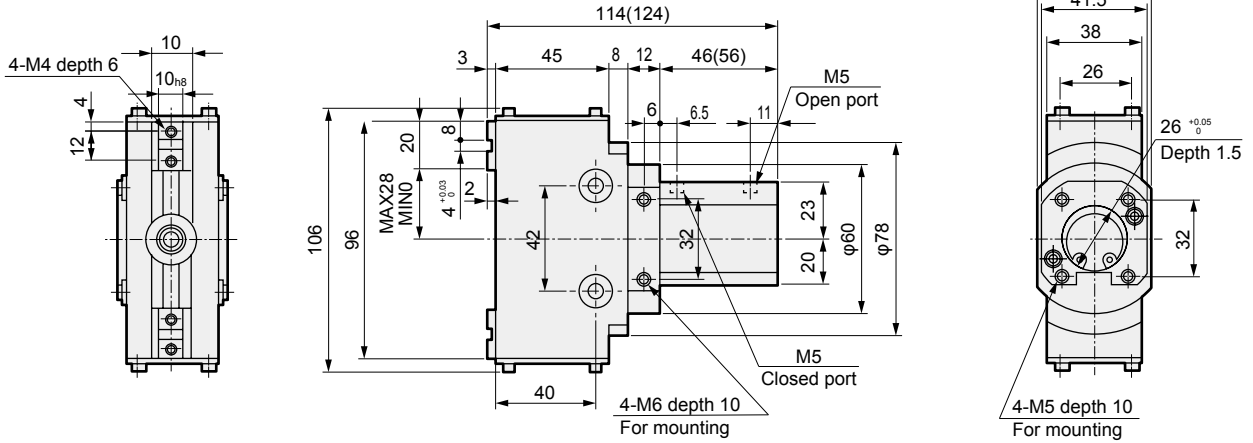
(Note) O type gripping power decreases approximately 20 to 30% in the closed direction compared to double acting.
C type gripping power decreases approximately 10 to 20% in the open direction compared to the double acting.

Dimensions

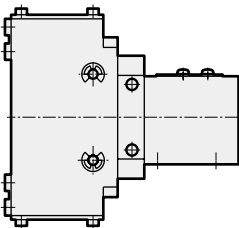
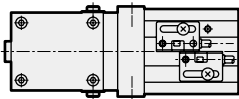


- HGP-3CS standard/O/C

● Dimensions in () are for C [normally closed] specifications.



- With switch



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STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
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SHC
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